



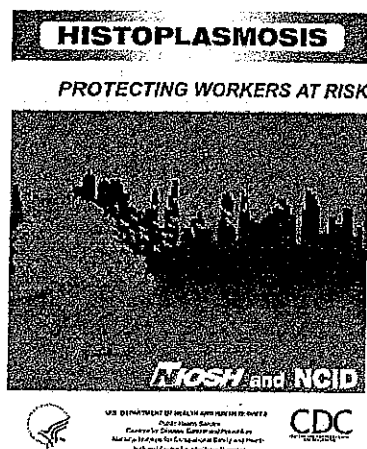
Centers for Disease Control and Prevention

CDC 24/7: Saving Lives. Protecting People.™

September 1997

DHHS (NIOSH) Publication Number 97-146

Note: This publication has been superseded by [2005-109 \(/niosh/docs/2005-109/default.html\)](http://www.cdc.gov/niosh/docs/2005-109/default.html)



I am already TB+ -
I cannot chance being out-
side with 100+ pigeons only
28 inches from my yard!

Histoplasmosis: Protecting Workers at Risk

What is histoplasmosis?

Histoplasmosis is an infectious disease caused by inhaling the spores of a fungus called *Histoplasma capsulatum*. Histoplasmosis is not contagious; it cannot be transmitted from an infected person or animal to someone else.

Histoplasmosis primarily affects a person's lungs, and its symptoms vary greatly. The vast majority of infected people are asymptomatic (have no apparent ill effects), or they experience symptoms so mild they do not seek medical attention and may not even realize that their illness was histoplasmosis. If symptoms do occur, they will usually start within 3 to 17 days after exposure, with an average of 10 days. Histoplasmosis can appear as a mild, flu-like respiratory illness and has a combination of symptoms, including malaise (a general ill feeling), fever, chest pain, dry or nonproductive cough, headache, loss of appetite, shortness of breath, joint and muscle pains, chills, and hoarseness. A chest X-ray can reveal distinct markings on an infected person's lungs.

* Chronic lung disease due to histoplasmosis resembles tuberculosis and can worsen over months or years. Special antifungal medications are needed to arrest the disease. The most severe and rarest form of this disease is disseminated histoplasmosis, which involves spreading of the fungus to other organs outside the lungs. Disseminated histoplasmosis is fatal if untreated, but death can also occur in some patients even when medical treatment is received. People with weakened immune systems are at the greatest risk for developing severe and disseminated histoplasmosis. Included in this high-risk group are persons with acquired immunodeficiency syndrome (AIDS) or cancer and persons receiving cancer chemotherapy; high-dose, long-term steroid therapy; or other immuno-suppressive drugs. *



Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People.™

C. neoformans cryptococcosis

Sources of Cryptococcosis

How is someone infected with *Cryptococcus neoformans*?

C. neoformans spores are typically found in bird droppings (especially pigeon droppings) or in soil contaminated with bird droppings. Humans can become infected after inhaling microscopic, airborne fungal spores from the environment. Cryptococcosis is not known to be spread from person to person, from animal to animal, or from animals to humans.

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National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)

Division of Foodborne, Waterborne, and Environmental Diseases (DFWED)

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WHY WOULD I WANT TO SIT IN
my yard i take a chance !!
This is a total nuisance and
does NOT allow me to be on my
OWN property! I should NOT
be forced to stay indoors!

PilotOnline.com

Chesapeake judge rules against man's homing pigeons

By Margaret Matray
The Virginian-Pilot
© March 16, 2015

CHESAPEAKE

After a lengthy legal battle, a Deep Creek man must give up his flock of homing pigeons for good.

A Circuit Court judge has ruled in the city's favor in a civil case, and Roy Kinser will either have to move the pigeons inside his house, get rid of them or move to an agricultural district, Assistant City Attorney Ryan C. Samuel said.

"We feel that the judge enforced the law," Samuel said.

The ruling supports the city's argument that pigeons are considered livestock and don't belong in a residential community.

Kinser's attorney, Scott Flax, did not respond to multiple messages seeking comment. Kinser also could not be reached for comment.

Flax had argued that homing pigeons are domesticated and that city code defines a pet bird as one that is domesticated and "kept indoors."

Judge Randall D. Smith's decision comes more than three years after Kinser's legal fight with the city began.

Kinser had spent about 12 years racing the birds before the city told him they didn't belong in his neighborhood - even in coops.

In 2011, the city ordered him to remove more than 140 pigeons from his property.

After unsuccessfully pleading to the Board of Zoning Appeals, Kinser filed a petition in Circuit Court. He withdrew the court filing early last year, hoping to work with City Council members on an ordinance change that would allow him to keep his birds. That didn't happen.

Kinser's birds haven't flown free since the Board of Zoning Appeals ruling, his attorney wrote in a filing, and they are kept in enclosed coops on his property.

The city filed misdemeanor criminal charges against Kinser and his wife for a zoning violation, but a General District judge dismissed the charges last summer.

The city then asked the Circuit Court to order that the birds be removed, and

Chesapeake judge rules against man's homing pigeons | HamptonRoads... <http://hamptonroads.com/2015/03/chesapeake-judge-rules-against-man...>

Smith sided with the city in his ruling last month.

"We're obviously very pleased with the decision," City Attorney Jan Proctor said.

Margaret Matray, 757-222-5216, margaret.matray@pilotonline.com

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Bird Droppings - More than just a mess!

Birds: Two points of view.

Most people regard birds as a necessary and pleasant member of the wildlife community. But there are those that consider these very same birds to be an environmental hazard. These people have dealt with the less attractive side of birds, their droppings.

Not just an eyesore.

Bird droppings are hazardous to your property. They are highly corrosive and can damage, dissolve or deteriorate nearly any building material. Wood, stone, concrete, marble, steel, copper, aluminum, and shingles are all susceptible. If allowed to accumulate, bird droppings can damage roofs, clog gutters, discolor paint, weaken I-beams

and structural steel, ruin cloth awnings, and short electrical equipment.

Hazardous to your health.

The most disturbing problem is the dangerous disease causing micro-organisms and parasites that are often found in bird droppings. Entomologist research has identified at least 60 transmittable diseases found in bird droppings, bird nests and on birds themselves. Ironically, it is often the behavior of the bird that contributes to the problem. Pest birds deposit huge quantities of droppings in one year. When combined with their habit of returning to the same roosts year after year, you can end up with conditions that are ideal for disease causing micro-organisms.

Inhalation and ingestion.

Diseases found in bird droppings are most often transmitted to humans by inhalation and ingestion. When bird droppings dry out, they turn into a powder like substance that, when disturbed, create small clouds of fine dust. When inhaled or ingested, the dust carries the contaminants in the droppings into the body.

Three common species.

The following tables provide a comprehensive list of transmittable diseases associated with the three most common pest bird species, pigeons, starlings and sparrows. These birds are widespread and are often the source for most pest bird problems.

Bacterial Diseases	Pigeons	Starlings	Sparrows
Erysipeloid	X	X	X
Fowl Typhoid	X		
Infectious Coryza	X		
Listeriosis	X		X
Paratyphoid	X	X	X
Pasteurellosis	X	X	
Pullorum Disease	X		X
Salmonellosis	X	X	X
Spirochetosis	X	X	X
Streptococcosis	X		
Tuberculosis	X		X
Ulcerative Enteritis	X		
Virbriosis			X
Yersinosis	X		X

Mycotic Diseases	Pigeons	Starlings	Sparrows
Aspergillosis	X		
Blastomycosis	X	X	
Candidiasis	X		
Cryptococcosis	X		
Histoplasmosis	X	X	
Sarcosporidiosis			X

Protozoal Diseases	Pigeons	Starlings	Sparrows
American Trypanosomiasis	X		
Coccidiosis	X	X	X
Haemoproteus	X		
Leucocytozoonosis	X		
Toxoplasmosis	X	X	X
Trichomoniasis	X		X

continued on next page

Recketttsial & Chlamydial Diseases	Pigeons	Starlings	Sparrows
Chlamydiosis	X	X	X
Piroplasmosis	X		
Q Fever	X	X	

Viral Diseases	Pigeons	Starlings	Sparrows
Encephalitis	X	X	X
Eastern Equine Encephalitis	X	X	X
Fort Morgan Encephalitis			X
St. Louis Encephalitis	X	X	X
Venezuelan Encephalitis			X
West Nile Encephalitis	X		
Western Equine Encephalitis	X		X
Meningitis	X		
Newcastle Disease	X	X	X
Pox	X	X	X
Transmissible Gastroenteritis		X	X

Parasitic Cestodes	Pigeons	Starlings	Sparrows
Davaubea proglottina	X		
Railletina tetragona	X		
Taeniasis	X	X	X

Parasitic Nematodes	Pigeons	Starlings	Sparrows
Capillariasis (3 spp.)	X	X	
Dispharyxiasis	X	X	X
Eyeworm	X		
Gapeworm		X	
Tetramariasis (2 spp.)	X	X	X

Parasitic Trematodes	Pigeons	Starlings	Sparrows
Schistosomiasis	X	X	X
Brachylaemus commutatus	X		
Brachylaemus fuscatus	X		
Collyriculum faba		X	X
Cotylurus cornutus	X		
Cryptocoyle convacum	X		
Echinoparyphium paraulum	X		
Echinoparyphium recurvatum	X		
Echinostoma revoltum	X		
Haplorchis pumilio	X		
Hypoderaeum conoideum	X		
Plagiorchis murus	X		
Postharmostomum gallinum	X		
Riberiola ondatrae	X		
Tamerlania bragai	X	X	X

Dermatosis	Pigeons	Starlings	Sparrows
Acariasis	X	X	X

Table data compiled from: *Health Hazards from Pigeons, Starlings and English Sparrows* by Walter H. Weber. Copyright 1979, Thompson Publications. Information reprinted by Nixalite-07/08/05.



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Public Employees Occupational Safety and Health Program

Division of Epidemiology, Environmental and Occupational Health

Christine Todd Whitman
Governor

Christine M. Grant, JD, MBA
Commissioner

April, 2000

Control of Health Hazards Associated with Bird and Bat Droppings

Special points of interest:

- Disease Association
- Recognition
- Evaluation
- Hazard Control
- Recommendations
- Further Information

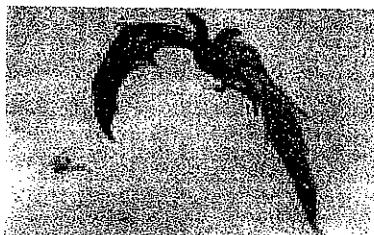
Health Risks

Large populations of roosting birds may present a disease risk. The most serious health risks arise from disease organisms that grow in the nutrient-rich accumulations of bird droppings, feathers and debris under a roost — particularly if roosts have been active for years. In addition, insects that live on birds or their droppings may become a problem when the infested birds leave roosts or nests. These insects can invade buildings and bite or irritate people.

This bulletin discusses the health risks and control of the risk of several of the fungal diseases associated with bird and bat droppings and methods of controlling these risks.



location. In one New Jersey worksite, accumulated manure was found in a stair well leading to the basement. Local newspapers reported that a city hall building was "taken over" by pigeons that had deposited several inches of manure on the window ledges. At a bridge commission, employees complained to the PEOSH Program that their booths were covered in pigeon droppings. Maintenance engineers at a university campus were concerned about bird droppings near a ventilation system located on the roof of one of the buildings. Furthermore, several building attics were evaluated because of employee concerns with bird manure accumulations.



The PEOSH Program has evaluated several work sites where employees were concerned about health hazards from accumulated pigeon droppings. The common denominator in these PEOSH investigations has

been the presence of roosting pigeons in an undisturbed

*MR Morris has
done this for
3+ YEARS*

Fungal Diseases

Among the fungal diseases associated with bird and bat droppings the two most common are histoplasmosis and cryptococcosis.

Histoplasmosis

Histoplasmosis is caused by a fungus (*Histoplasma capsulatum*). The disease is transmitted to humans by airborne fungus spores from soil contaminated by pigeon and starling droppings (as well as from the droppings of other birds and bats). The active and inactive roosts of blackbirds, starlings, grackles and cowbirds have also been found to be heavily contaminated with fungus spores.



The soil under a roost usually has been enriched by droppings for three years or more for the disease organism to reach significant levels. Although almost always associated with soil, the fungus has been found in droppings alone, particularly those from bats. Infection occurs when spores, carried by the air, are inhaled - especially after a roost has been disturbed. Most infections are mild and produce either no symptoms or a minor influenza-like illness. On occasion, the disease can cause high fever, blood abnormalities, pneumonia and even death. In some areas up to 80 percent of the population show evidence of previous, usually asymptomatic infection.

Dusts containing *H. capsulatum* spores can be aerosolized during construction, excavation, or demolition. Once airborne, spores can be carried easily by wind currents over long distances. Such contaminated airborne dusts can cause infections not only in persons at a work site, but also in others nearby. Such activities were suggested as the cause of the three largest outbreaks of histoplasmosis ever recorded. All three outbreaks took place in Indianapolis, Indiana. During the first outbreak, in

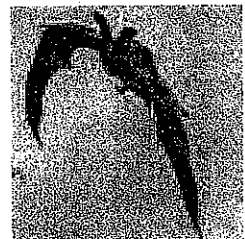
the fall of 1978 and spring of 1979, an estimated 120,000 people were infected, and 15 people died. The second outbreak, in 1980, was similar to the first in the number of people affected. During the third outbreak, in 1988, AIDS patients accounted for nearly 50% of culture-proven cases.

The National Institutes of Health (NIH) has reported a potentially blinding eye condition - presumed ocular histoplasmosis syndrome (OHS) - that results from the fungus. NIH estimates that 4 percent of those exposed to the airborne organism are at risk of developing OHS.

The soil in a stand of trees where blackbirds have roosted for 3 or more years should be suspected of being contaminated by the fungus. Habitats of pigeons and bats, and poultry houses with dirt floors have also been found contaminated by *H. capsulatum*.

Fresh bird droppings on surfaces such as sidewalks and windowsills have not been shown to present a health risk for histoplasmosis because birds themselves do not appear to be infected by *H. capsulatum*. Rather, bird manure is primarily a nutrient source for the growth of *H. capsulatum* already present in soil. Unlike birds, bats can become infected with *H. capsulatum* and consequently can excrete the organism in their droppings.

Bats are associated with a few diseases that affect people. The incidence of histoplasmosis being transmitted from bat droppings to humans occurs infrequently. Large colonies of bats do not normally inhabit work areas. Bat colonies are common in undisturbed areas. Nevertheless, fresh bat droppings (unlike fresh bird dropping) can contain the histoplasmosis fungus. Bat droppings do not need to come into contact with soil to be a source of the disease.



Anyone working at a job or present near activities where material contaminated with *H. capsulatum* becomes airborne can develop histoplasmosis if enough spores are inhaled. After an exposure, how ill a person becomes varies greatly and most likely depends on the number of spores inhaled and a person's age and susceptibility to the disease. The number of inhaled spores needed to cause disease is unknown. Infants, young children, and older persons, in particular those with chronic lung disease, are at increased risk for developing symptomatic histoplasmosis.

Below is a partial list of occupations and hobbies with risks for exposure to *H. capsulatum* spores. Appropriate exposure precautions should be taken by these people and others whenever contaminated soil, bat droppings, or bird manure are disturbed:

- Bridge inspector or painter
- Chimney cleaner
- Construction worker
- Demolition worker
- Farmer
- Gardener
- Heating and air-conditioning system installer or service person
- Microbiology laboratory worker
- Pest control worker
- Restorer of historic or abandoned buildings
- Roofer and
- Spelunker (cave explorer).

If people who engage in these activities develop flu-like symptoms days or even weeks after disturbing material that might be contaminated with *H. capsulatum*, and the illness worsens rather than subsides after a few days, medical care should be sought. The health care provider should be informed about the potential exposure.

Cryptococcosis

Cryptococcus neoformans (*C. neoformans*) is found worldwide. Its main habitats are debris around pigeon

roosts and soil contaminated with decaying pigeon or chicken droppings. It is generally accepted that the organism enters the host by the respiratory route in the form of a dehydrated yeast or as spores.

Like histoplasmosis, most cryptococcosis infections are mild and occur without symptoms. Diffuse pulmonary infection is often asymptomatic and unrecognized. Persons with weakened immune systems, however, are more susceptible to symptomatic infection. The generalized form of cryptococcosis begins with a lung infection and spreads to other areas of the body, particularly the central nervous system, and is usually fatal if left untreated. The cutaneous (skin) form is characterized by acne-like skin eruptions or ulcers with nodules just under the skin. The cutaneous form is very rare, however, without generalized (systemic) disease. Unlike histoplasmosis, outbreaks (multiple cases at a location) of cryptococcosis infections have not been documented.

Pigeon droppings appear to be the most important source of the fungus *C. neoformans* in the environment. The fungus is typically found in accumulations of droppings around roosting and nesting sites, for example, attics, cupolas, ledges and water towers. It has been found in as many as 84 percent of samples taken from old roosts. Even when old and dry, bird droppings can be a significant source of infection.

Other Associated Diseases

Other diseases carried or transmitted by birds affect people to a lesser degree. Psittacosis and toxoplasmosis are normally mild in humans; however, serious illness or death may occur rarely. Pigeons and sparrows also have been implicated (along with many other species of birds) as sources of encephalitis viruses transmitted by mosquitoes.



REALLY - NOT A HEALTH CONCERN??

* communication should include a warning that individuals with weakened immune systems are at the greatest risk of developing severe and disseminated fungal disease if they become infected. These people should seek advice from their health care provider.

Controlling Aerosolized Dust When Removing Bat or Bird Manure from a Building

The best way to prevent exposure to fungus spores is to avoid situations where material that might be contaminated can become aerosolized and subsequently inhaled. A brief inhalation exposure to highly contaminated dust may be all that is needed to cause infection and subsequent development of fungal disease. Therefore, work practices and dust control measures that eliminate or reduce dust generation during the removal of bat or bird manure from a building will also reduce risks of infection and subsequent development of disease. For example, before shoveling or sweeping dry, dusty material, it should be made wet with a water spray to reduce the amount of dust aerosolized during the activity. Adding a surfactant or wetting agent to the water might further reduce the amount of aerosolized dust. Once the material is wetted, it can be collected in double, heavy-duty plastic bags, a 55-gallon drum, or some other secure container for immediate disposal.

An alternative method is to use an industrial vacuum cleaner with a high-efficiency (HEPA) filter to bag contaminated material. Truck-mounted or trailer-mounted vacuum systems are recommended for buildings with large accumulations of bat or bird manure. These high-volume systems can remove tons of contaminated



material in a short period. Using long, large-diameter hoses can also remove contaminated material located several stories above the waste hopper. This advantage eliminates the risk of dust exposure that can happen when bags tear accidentally or containers break during their transfer to the ground.

Air sampling, surface sampling, or the use of any other method

intended to confirm that no infectious agents remain following removal of bat or bird manure is unnecessary in most cases. However, before a removal activity is considered finished, the cleaned area should be visually inspected to ensure that no residual dust or debris remains.

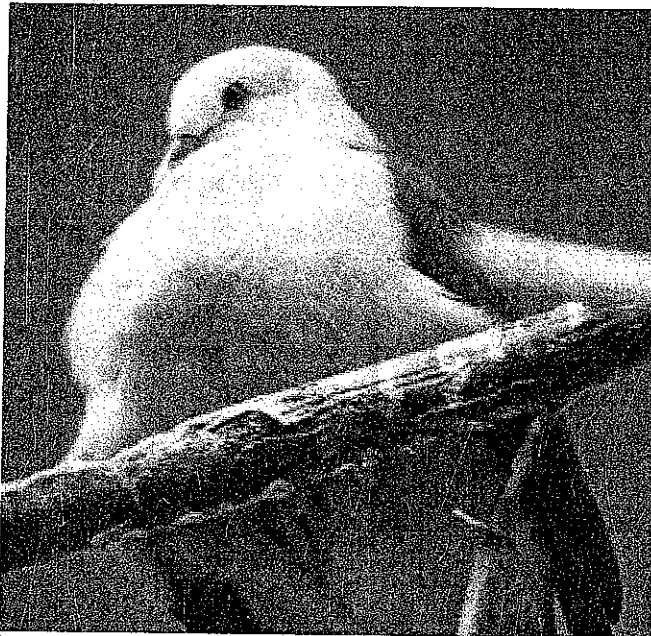
Disinfecting Contaminated Material

Disinfectants have occasionally been used to treat contaminated soil and accumulations of bat manure when removal was impractical or as a precaution before a removal process was started. Formaldehyde solutions are the only disinfectants proven to be effective for decontaminating soil containing fungal spores. Because of the potentially serious health hazards associated with formaldehyde exposures, this chemical should be handled only by persons who know how to apply it safely. Any material that might be contaminated with fungal spores that is removed from a work site should be disposed of or decontaminated properly and safely and not merely moved to another area where it could still be a health hazard. Before an activity is started, the quantity of material to be removed should be estimated. (If the approximate volume of dry bat or bird

examiner.com

Pigeon droppings pose serious health risks at concert

Would you "welcome" this 28 inches from your yard!?



images.google



Nancy Zielinski
Grand Rapids Public Health
Examiner

July 27, 2010


An onslaught of pigeon droppings at a recent Kings of Leon concert in St. Louis were responsible for cutting short the band's performance and sent the members of the band running for cover.

Pigeon droppings pose a serious health hazard to humans and is associated with human diseases such as cryptococcosis and histoplasmosis.

Cryptococcosis is a fungal disease that is found in the soil and associated with pigeon droppings. It is a disease that typically infects individuals with

compromised immune systems, although it may affect people who are healthy. Humans can become infected simply by inhaling airborne fungi spread by droppings. Infections may cause a pneumonia-like illness, with shortness of breath, coughing and fever. Skin lesions may develop. Health experts advise seeing a doctor immediately. Treatment may include antifungal drugs such as fluconazole.

Histoplasmosis is a disease caused by fungus that may grow in pigeon droppings and found in soils around the world. A person may become infected by breathing in dry fungus spores that become airborne. Those infected may experience chest pains,



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Bird Problems?

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Please tell us which aspect of service is most important to you:

- ☒ Pests eliminated for good
☐ Satisfaction or my money back
☐ All of the above

Do you own your home?

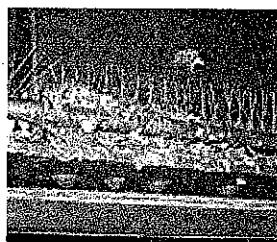
- ☒ Yes ☐ No

Please enter ZIP code:



Bats
Bats cause large buildups of droppings. If you see it in your home be sure to act

immediately and remove it. There are all types of microorganisms which can flourish in their fecal matter - histoplasmosis being one of better known - which could present a hazard to residents. a smaller chance of an infected bird in that area, a smaller chance of a mosquito biting an infected bird and then biting a human.



Pigeons
Pigeons can be cute at the park, but reek havoc in homes and buildings. Act now before they damage yours!

[K Cup Coffee Info](#)

Frequently Asked Questions

Do Pigeons cause diseases?

Pigeon droppings are not only unsightly; their acid content can eat into soft stone and cause long-term damage to buildings. The nest droppings, and feathers also block gutters and rainwater pipes causing water damage. Their droppings can lead to severe hazards on pavements, especially for the elderly, and can carry pathogenic organisms. Pigeons can carry a number of potentially infectious diseases such as salmonella, tuberculosis and ornithosis (a mild form of psittacosis - pneumonia-like symptoms). They are also a source of allergens, which can cause respiratory ailments like pigeon fancier's lung and allergic skin reaction. There is potential for these illnesses to be spread to people through contact with pigeon droppings, dandruff and feathers; pigeon parasites; or where dead infected pigeons get into food or water sources.

What is the life cycle of a pigeon?

The feral pigeon is capable of breeding throughout the year and nests may be found in any month, however the peak occurs between March and July. Usually, two white eggs are laid on consecutive days. Incubation lasts about 18 days with fledging taking place about 4 ½ weeks later. A new clutch can be laid when the first young are 20 days old. Therefore up to nine broods may be produced per year by just one female pigeon.

Does exclusion work?

Total proofing against all birds can only be guaranteed by the closure of all openings bigger than 20mm in diameter. Pigeon proofing includes simple tasks like sealing gaps under eaves and replacing missing roof tiles. Pigeons can be deterred from using common perching and roosting sites such as window ledges and roofs by fitting stainless steel wires suspended and sprung at the correct height to prevent the birds from landing. Other commonly-available deterrents to the feral pigeon include barrier gel, spikes and bird repellent gel.

How many diseases to pigeons carry?

More than 60 transmissible bird diseases (some of which are fatal) are associated with geese, pigeons, starlings and house sparrows. For example:

Histoplasmosis is a respiratory disease that may be fatal. It results from a fungus growing in dried bird droppings. Candidiasis is a yeast or fungus infection spread by pigeons. The disease affects the skin, the mouth, the respiratory system, the intestines and the urogenital tract, especially the vagina. It is a growing problem for women, causing itching, pain and discharge. Cryptococcosis is caused by yeast found in the intestinal tract of pigeons and starlings. The illness often begins as a pulmonary disease and may later affect the central nervous system. Since attics, cupolas, ledges, schools, offices, warehouses, mills, barns, park buildings, signs, etc. are typical roosting and nesting sites, the fungus is apt to be found in these areas.

St. Louis Encephalitis, an inflammation of the nervous system, usually causes drowsiness, headache and fever. It may even result in paralysis, coma or death. St. Louis encephalitis occurs in all age groups, but is especially fatal to persons over age 60. The disease is spread by mosquitoes which have fed on infected house sparrow, pigeons and house finches carrying the Group B virus responsible for St. Louis encephalitis.

Salmonellosis often occurs as "food poisoning" and can be traced to pigeons, starlings and sparrows. The disease bacteria are found in bird droppings; dust from droppings can be sucked through ventilators and air conditioners, contaminating food and cooking surfaces in restaurants, homes and food processing plants.

E.coli. Cattle carry E. coli 0157:H7. When birds peck on cow manure, the E. coli go right through the birds and the bird droppings can land on or in a food or water supply.

Besides being direct carriers of disease, nuisance birds are frequently associated with over 50 kinds of ectoparasites, which can work their way throughout structures to infest and bite humans. About two-thirds of these pests may be detrimental to the general health and well-being of humans and domestic animals. The rest are considered nuisance or incidental pests. A few examples of ectoparasites include:

Bed bugs (*Cimex lectularius*) may consume up to five times their own weight in blood drawn from hosts which include humans and some domestic animals. In any extreme condition, victims may become weak and anemic. Pigeons, starlings and house sparrows are known to carry bed bugs.

Chicken mites (*Dermanyssus gallinae*) are known carriers of encephalitis and may also cause fowl mite dermatitis and acariasis. While they subsist on blood drawn from a variety of birds, they may also attack humans. They have been found on pigeons, starlings and house sparrows.

Yellow mealworms (*Tenebrio molitor*), perhaps the most common beetle parasites of people in the United States, live in pigeon nests. It is found in grain or grain products, often winding up in breakfast cereals, and may cause intestinal canthariasis and hymenolepsiasis.

West Nile Virus while West Nile is technically not transmitted to humans from birds, humans can get infected by the bite of a mosquito who has bitten an infected bird. The obvious lesson is that the fewer birds there are in any given area, the better. This translates into

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

HEALTH BEAT**HEALTH HAZARDS ASSOCIATED WITH BIRD AND BAT DROPPINGS**

Health risks from birds and bats are often exaggerated. Nevertheless, large populations of roosting birds may present the risk of disease to people nearby. The most serious health risks arise from disease organisms that can grow in the nutrient-rich accumulations of bird droppings, feathers and debris under a roost — particularly if roosts have been active for years. External parasites also may become a problem when infested birds or bats leave roosts or nests. The parasites then can invade buildings and bite people.

Histoplasmosis

Histoplasmosis is caused by a fungus (*Histoplasma capsulatum*) found primarily in the areas drained by the Mississippi and Ohio rivers. Both humans and animals can be affected. The disease is transmitted to humans by airborne fungus spores from soil contaminated by pigeon and starling droppings (as well as from the droppings of other birds and bats). The soil under a roost usually has to have been enriched by droppings for two years or more for the disease organism to reach significant levels. Although almost always associated with soil, the fungus has been found in droppings (particularly from bats) alone, such as in an attic.

These
pigeons came
to our Area in
JAN '10 —
3+ yrs. ago!

Infection occurs when spores, carried by the air are inhaled — especially after a roost has been disturbed. Most infections are mild and produce either no symptoms or a minor influenza-like illness. On occasion, the disease can cause high fever, blood abnormalities, pneumonia and even death. In some areas, including portions of Illinois, up to 80 percent of the population show evidence of previous infection.

Outbreaks of histoplasmosis have occurred in Central Illinois.

The National Institutes of Health (NIH) has reported a potentially blinding eye condition — presumed ocular histoplasmosis syndrome (OHS) — that probably results from the fungus. NIH estimates that 4 percent of those exposed to the disease are at risk of developing OHS.

Cryptococcosis

Pigeon droppings appear to be the most important source of the disease fungus *Cryptococcus neoformans* in the environment. The fungus is typically found in accumulations of droppings around roosting and nesting sites, for example, attics, cupolas, ledges and water towers. It has been found in as many as 84 percent of

(both related to the beg bug), soft ticks, biting lice and the pigeon fly. Although most parasites associated with bird or bat roosts die quickly after the birds or bats leave, some may live for several weeks.

Droppings, feathers, food and dead birds under a roosting area can breed flies, carpet beetles and other insects that may become major problems in the immediate area.

These pests may fly through open windows or crawl through cracks to enter buildings. If birds or bats are discouraged from roosting around buildings, most of the parasites associated with them will soon die. If the pests are a problem after birds or bats have been excluded, the roost area may be treated with a residual insecticide appropriately labeled by the U.S. Environmental Protection Agency for control of fleas, ticks, mites and similar pests.

Removal and cleanup of bird and bat droppings

If there is a small accumulation of droppings from a few birds or bats, it can be cleaned up with soap and water. If large quantities of bird or bat droppings are present, contact an environmental engineering consultant for advice.

Workers should follow certain precautions to minimize risk from disease organisms in the droppings:

- During the cleanup, seal heating and cooling air ducts or shut the system down.
Only authorized cleanup personnel should be present.
- The cleanup should be done by healthy individuals.
- Wear a respirator that can filter particles as small as 0.3 microns.
- Wear disposable protective gloves, hat, coveralls and shoe coverings.
- Moisten the droppings with a light mist of water to keep spores from becoming airborne and keep them wet.
- Put droppings into sealed plastic garbage bags. The outside of the garbage bags should be rinsed off before they are placed in a disposal container.
- When finished and while still wearing the respirator, remove protective clothing and place it in a plastic bag.
- Wash or shower.
- Check with local government agencies to verify that disposal of the waste is permissible through standard trash pickup.
- Modify the structure to prevent birds or bats from reestablishing the roost.

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health fact sheets

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